OFFICE OF ADJUDICATIONS

IN THE MATTER OF	***:***	***ORDER NO. LIS-2004-091-V***
DAVID & BETSY SAMS	***:***	***NOVEMBER 2, 2007***

FINAL DECISION

I
SUMMARY

This is an appeal of a Removal Order issued by the Commissioner of the Department of Environmental Protection (DEP/department) pursuant to General Statutes §§22a-6, 22a-108, and 22a-361.[1] The order, issued to respondents David and Betsy Sams, requires the removal of a stepped, gabion seawall constructed along the shoreline of their property located on the Connecticut River in Old Saybrook.

The respondents and the DEP Office of Long Island Sound Programs (staff) are the parties to this proceeding. The respondents challenge the Commissioner's authority to issue the order, claiming that the seawall is located landward of the high tide line and therefore outside the scope of the Commissioner's jurisdiction under §§22a-359 and 22a-361. The respondents also deny that they have violated §22a-361 or have created or are maintaining a public nuisance as defined by §22a-108. Finally, the respondents claim that removal of the seawall will have serious consequences to their property and will result in adverse environmental impacts to coastal resources.

I have reviewed the evidence in this matter and find that the respondents have erected a seawall in tidal, coastal or navigable waters of the state waterward of the high tide line and are therefore subject to the Commissioner's jurisdiction under General Statutes §22a-359(a). In

[1] The Removal Order also references §22a-363f, which governs issuance of cease and desist orders. No such order was issued in this matter.

addition, the Commissioner has properly determined that the respondents' seawall constitutes a public nuisance and has rightfully ordered its removal pursuant to §22a-108 and in accordance with §22a-6. The respondents' seawall and the work associated with its construction violate the permitting requirements of §22a-361 and the coastal site plan review requirements of General Statutes §§22a-105, 22a-106 and 22a-109. In addition, by erecting their seawall, the respondents have acted in contravention of the important legislative goals and policies embodied in the Connecticut Coastal Management Act (CCMA). General Statutes §§22a-90 through 22a-113c. Enforcement of the Removal Order is proper and necessary. The Removal Order is therefore *affirmed.*

II
DECISION

A
FINDINGS OF FACT

1
Background

1. The respondents' property is located on the Connecticut River approximately four miles upstream from its mouth and Long Island Sound, and downstream from the towns of Essex and Deep River at 9 River Edge Road, Old Saybrook. After purchasing the property in September 1995, the respondents renovated their house and added a stone patio adjacent to stairs that lead to a dock. The respondents' licensed engineer, Gary Sharpe, conducted a topographic survey of the property to prepare site plans for the renovations that indicated the contours and elevations of the property with respect to NGVD[2], mean sea level. (Ex. RESP - 55; test. D. Sams, 9/18/06, pp. 106-108, G. Sharpe, 9/26/06, pp. 8, 9.)

2. The respondents applied for and received two permits from the DEP in 1996 and 1999 to construct a dock and then extend it for better boat access. Site plans submitted with each permit application (Plans I and II) were based on the topographical survey information used for the renovation project. The plans depicted a high tide line (HTL) elevation of 4.1 feet referenced to NGVD. Sharpe determined the HTL based on the one-year frequency tidal flood elevations

[2] A fixed reference point used as a standard geodetic datum for elevations in the United States. (Ex. DEP-19.)

published by the U.S. Army Corps of Engineers (USACE).[3] Sharpe customarily uses the USACE elevations for HTL determinations in DEP permit applications because the profiles are conservative and because he believes that the department favors use of the USACE elevations as reasonable determinants of the HTL. (Exs. DEP-2, 3; test. D. Sams, 9/18/06, pp.108 - 110, G. Sharpe, 9/26/06, pp. 10-15, 86, 87.)

3. During the summer of 2000, the respondents retained Landscape Specialties to renovate their landscape through its principal Chris Lawrie. The respondents had observed the effects of erosion along the shoreline of their property, including the apparent instability of the area, and began preliminary discussions with Lawrie regarding possible erosion control solutions. The respondents retained Lawrie to install a gabion seawall during the summer of 2004. The seawall was constructed during August and early September 2004. (Ex. DEP-20A, exs. RESP-32, 33, 49A - 49C; test. D. Sams, 9/18/06, pp. 112, 114-116, C. Lawrie, 9/20/06, p. 14.)

4. In response to a complaint received in late September 2004, staff conducted an investigation of the respondents' shoreline. In its inspection report, staff noted the location of the seawall and a silt fence, the presence of a "body of water with evidence of tide" and a "wrack line"[4] and determined that those factors indicated that the seawall was located waterward of the HTL and a violation was evident. During the inspection, staff observed and photographed a wrack line to the north of the respondents' dock, and debris and water in contact with the seawall to the south of the dock. Staff subsequently reviewed the DEP database for prior state authorizations issued for the property and found the two dock permits and associated Plans I and II. (Exs. DEP-1, 5; test. M. Gryzwinski, 9/18/06, pp. 6-16.)

5. On March 16, 2005, the DEP issued a Notice of Violation (NOV) to the respondents and Lawrie. The notice indicated that a stone-filled gabion seawall, approximately 261 feet long, was constructed along the shoreline of the respondents' property waterward of the HTL, without prior state authorization and in violation of General Statutes §22a-361. The notice required the

[3] 1988 Tidal Flood Profile for the Connecticut coastline prepared by the Hydraulics and Water Quality Section of the New England Division of the U.S. Army Corps of Engineers. (Ex. DEP-19.)

[4] A line of debris on the beach, which indicates where the water level intersects with the land. (Test. M. Gryzwinski, 9/18/06, p. 159, F. Bohlen, 9/19/06, p.90.)

respondents to submit a plan for removal of the seawall and for restoration of the shoreline "to its pre-existing condition". (Ex. DEP-7; test. M. Gryzwinski, 9/18/06, p. 30.)

6. In response to the NOV, the respondents retained Sharpe to conduct a second survey to locate the seawall. Sharpe prepared a site plan showing the location of the seawall based on his previously determined elevations. The respondents submitted the revised site plan, entitled "Improvement Location Survey", to the DEP on April 1, 2005 (Plan III). The portion of the seawall running from the south side of the respondent's dock to the southerly end of their property is shown on this Improvement Location Survey to be waterward of the HTL of 4.1 feet. (Ex. DEP-9; test. G. Sharpe, 9/26/06, p. 20.)

7. On May 13, 2005, the respondents filed an application with the DEP for a permit to modify and retain the seawall.[5] Sharpe prepared and included in the application another plan showing the HTL at elevation 2.8 feet NGVD (Plan IV). The DEP issued an order to the respondents to remove the seawall and restore the area on March 17, 2006. On April 7, 2006, the respondents filed an Answering Statement, including a request for a hearing.[6] The Connecticut Gateway Commission and the Town of Old Saybrook filed requests to intervene in the proceedings, which were denied.[7] Hearings were conducted over five days. After post-hearing efforts to arrive at a settlement failed, the parties submitted briefs in support of their positions. (Exs. DEP-8, 9, 12, 13, ex. RESP-17; test. M. Gryzwinski, 9/18/06, pp. 32, 55.)

2
Site Conditions

8. The shoreline of the respondents' property is a steep bank with a grade of approximately seventy degrees and consists of gravel and loose sandy soils. Erosion along the southern portion

[5] No determination had been issued on this application at the time of the hearing in this matter. I take notice of the fact that the application was subsequently denied on June 12, 2007.
[6] All documents pertaining to the procedural history that are not specifically cited are contained in the docket file maintained by the Office of Adjudications and are part of the record in this matter. General Statutes §4-177(d).
[7] The petitions were denied because they failed to demonstrate that the petitioners' legal rights, duties or privileges will be affected by the decision or that the petitioners' participation was necessary to the proper disposition of this proceeding. §22a-3a-6(k)(1)(B)(i) and (ii). A representative of the Gateway Commission provided sworn comment

of the bank has caused a loss of natural vegetation. Erosion at the top of the bank was apparently caused by weather related runoff and at the base, by scouring from wave and wake activity. By summer 2000, the southern portion of the bank eroded to a point where there was little vegetation remaining. (Ex. DEP-20A, exs. RESP-32, 49A-49C; test. D. Sams, 9/18/06, pp. 112-114, 140, 141, test. C. Lawrie, 9/20/06, pp. 10, 21-23.)

9. The on-going erosion would have eventually altered the bank to a point of equilibrium or stability, however, the mature trees situated nearest to the bank would break away and fall into the river. Loss of the trees would exacerbate the instability of the area and eventually undermine the respondents' patio. The respondents considered various means to mitigate the effects of erosion without modifying the slope of the bank. The composition of the soil and the severity of the grade appeared to make a vegetative solution impossible and a riprap system would require excavation of the bank beyond that required for the gabion system. (Test. F. Bohlen, 9/19/06, p. 131, C. Lawrie, 9/20/06, pp. 9-11, M. Gryzwinski, 9/29/06, pp. 39, 40.)

10. The respondents' April 2005 permit application identifies and characterizes the aquatic resources on and adjacent to the site as "[g]eneral resources, coastal hazard area, coastal waters and estuarine embayments (Connecticut River) and shorelands." Staff characterizes the site of the seawall as a "bluff" that provided sand to the beach along the respondents' shoreline prior to construction of the seawall.[8] The area of the site is shown on a DEP Coastal Resources Map (1979); but it is not identified as a coastal bluff. However, similar features along the Long Island Sound shoreline are identified as bluffs and escarpments on the map. (Ex. DEP-12, ex. RESP-55; test. M. Gryzwinski, 9/18/06, pp. 64, 166, 167, 9/26/06, G. Sharpe, pp. 47, 48, M. Gryzwinski, p. 36.)

3
The Wall

11. The gabion seawall consists of a series of wire cages that are three feet deep, nine feet long and three feet high. The cages are wired together, filled with stones sized for specific site

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during the hearing and the Town of Old Saybrook was authorized to submit its post-hearing brief in support of the department.

conditions, and installed one course or step at a time. Each course is set back twelve inches from the lower course. Installation of the wall required some excavation of material that was used to backfill portions of the gabions and to stabilize the area around several mature trees. (Ex. RESP-31; test. M. Gryzwinski, 9/18/06, p. 55, C. Lawrie, 9/20/06, pp. 13, 15, 17-19.)

12. The seawall was constructed by hand with 500 tons of stone, although a small excavator was used to move fill on the upper portion of the slope. Construction began at the toe of the bank with a twelve-inch deep and three-foot wide trench for the base, or footing, of the seawall. The first course above-grade is three feet deep and was installed on top of the footing, set back to half its width. Each successive course was similarly constructed and set back twelve inches. Three courses above the footing run the entire length of the respondents' shoreline. A shorter, fourth course was installed along the southern end of the shoreline to provide additional protection to the trees closest to the seawall. (Ex. HO-1; test. C. Lawrie, 9/20/06, pp. 15, 38-42.)

13. The respondents and Lawrie understood and agreed that the seawall and all construction activities would occur above the HTL shown on Plans I and II. No surveys were conducted or plans prepared for the specific purpose of constructing the seawall. Lawrie determined from Plans I and II that the HTL was located waterward of the last stair leading from the respondents' patio to the dock. A silt fence was installed along the respondents' shoreline at what Lawrie believed to be the HTL; all construction work was conducted landward of the silt fence. The seawall construction photographs show that the silt fence was installed in alignment with the most landward set of dock pilings. These pilings are shown to be waterward of the 4.1-foot elevation on the plans. (Ex. DEP-3, ex. HO-1, #278, ex. RESP-31; test, D. Sams, 9/18/06, pp. 123, 124, 126, C. Lawrie, 9/20/06, pp. 17, 39, 40.)

14. In their Answering Statement, the respondents noted that the seawall was constructed "[i]n an effort to prevent continuing and devastating erosion attributable to tidal activity and waves caused by storms, as well as waves from nearby motor boats…."[9] The gabions are permeable,

[8] Coastal bluffs are defined as "naturally eroding shorelands marked by dynamic escarpments or sea cliffs which have slope angles that constitute an intricate adjustment between erosion, substrate, drainage and degree of plant cover." General Statutes §22a-93(7)(A).
[9] See footnote 6.

although not to the extent that would allow sediment to pass through and continue to benefit the beach in that area. (Test. C. Lawrie, 9/20/06, pp. 17, 18, M. Gryzwinski, 9/29/06, pp. 31, 41.)

15. In their 2005 permit application, the respondents propose to replace the third and fourth courses of the stone gabions with shallower courses of "green gabions" that would be supplemented with vegetative plantings. The footing and first two courses of the stone gabions would remain. Staff considers this proposal to be inconsistent with the requirements of the CCMA that stress the use of non-structural solutions to mitigate the effects of erosion. (Exs. DEP-12, 14; test. M. Gryzwinski, 9/18/06, pp. 53-55.)

4
Determination of the High Tide Line

a
DEP Determination

16. Staff relied on a combination of visual observations, Plans I and II, tidal predictions and the USACE tidal flood profiles to determine that the seawall was located waterward of the HTL. Staff customarily relies on the published elevations depicted on the USACE tidal flood profile for the one-year frequency tidal flood as a "rough approximation" of the HTL. Staff also routinely examines the locations of wrack lines during periods of predicted high tide. (Exs. DEP-9, 19; test. M. Gryzwinski, 9/18/06, pp. 14, 16, 17, 21, 27, 31, 32, 34.)

17. The one-year frequency tidal flood is a statistical indicator of the level a tidal flood might be expected to reach once each year. The historical data used for the tidal flood profiles were taken from the USACE or National Ocean Service (NOS) tide gauges. According to the USACE, the profiles were developed between gauges "using high watermark data from historic storms, a knowledge of mean tidal conditions, and sound engineering judgment." The profiles are based on observed, rather than predicted tide data, which means that astronomical and meteorological influences on tide levels are included in the tidal flood profiles. The tidal flood data includes some storm events but not major coastal hurricane events. (Ex. DEP-19, ex. RESP-51; test. M. Gryzwinski, 9/18/06, pp. 23, 24, 150, F. Bohlen, 9/19/06, p. 54.)

18. During the initial site inspection on September 29, 2004, staff observed the presence of a wrack line and water in contact with the southern portion of the seawall. Staff reviewed Plans I and II, which depict the 4.1-foot elevation as the HTL based on the USACE tidal flood profile. Photographs taken on June 22, 2006, during a period of predicted high tide, show water up to and overlapping the footing and in contact with the southern portion of the seawall. Additional photographs taken on September 12, 2006, also at a time of predicted high tide, show water and debris overlapping the footing and in contact with the southern portion of the seawall. No instances of intense storm activity in the area were indicated during any of the site inspections. (Exs. DEP-5, 16, 20A-F; test. M. Gryzwinski, 9/18/06, pp. 21-25, 31, 32, 64-69.)

b
Respondent's Determination

19. The respondents again retained Sharpe to determine whether the seawall was located waterward of the HTL. Sharpe employed standard survey techniques by first establishing a benchmark on the respondents' dock at an elevation of 6.5 feet referenced to NGVD. Measurements of surface water heights were taken at periods of predicted high tide over fifteen months from April 11, 2005 to July 13, 2006, and converted to elevations referenced to NGVD. Elevations were also determined for any wrack lines present and weather conditions were recorded. (Ex. RESP-41; test. G. Sharpe, 9/26/06, pp. 21-23.)

20. On May 13, 2005, Sharpe submitted Plan IV with the respondents' 2005 permit application to retain the seawall. Sharpe indicated on the site plans a HTL elevation of 2.8 feet, which he noted was "based on actual on-site observations … and does not reflect the use of the one-year frequency tidal flood." Sharpe excluded from his consideration data obtained on occasions where the river was above flood stage and where "a weather factor might have influenced the tide". Sharpe confirmed his determinations by reviewing mean higher high water[10] tidal data published by the National Oceanic and Atmospheric Administration, National Ocean Service, within the

[10] A tidal datum that represents the average of the higher of the two high tides of any tidal day observed over the eighteen-year National Tidal Datum Epoch. (Notice is taken of the National Ocean Service Tide and Current Glossary, January 2000.)

area of the Lyme Bridge on the Connecticut River. (Exs. RESP-41, 50; test. G. Sharpe, 9/26/06, pp. 21-28.)

21. The data collected during Sharpe's entire survey period (between April 11, 2005 and July 13, 2006) indicate water levels as high as 4.3 and 4.4 feet NGVD under light wind conditions and following rain. During the "highest tide" as noted in the survey, the water level was reported at 4.25 feet NGVD with water at the seawall; weather conditions were described as "windy". Wrack line elevations were reported as high as 4.0 feet NGVD during a period of heavy rains, 3.8 feet under light wind conditions, and 3.7 feet under calm conditions. Weather conditions noted in the survey as impacting high tide elevations and wrack line locations varied from "calm" to "heavy rain" with winds ranging from "light breeze" to "very windy". The survey does not specify the exact location of any wrack line along the respondents' shoreline. (Exs. DEP-5, 16, 20, ex. RESP-41.)

22. The respondents retained Professor W. Frank Bohlen to review and confirm Sharpe's data and conclusions. Bohlen noted that the Connecticut River is subject to tidal influences as far up stream as Hartford. Bohlen dismissed the one-year frequency tidal flood elevation because it is influenced by storm events. To arrive at an accurate assessment of the tidal elevations affecting the Sams property, he claims that it is best to obtain direct measurements of water levels over a relatively long period of time (i.e., more than twelve months). Based on the entire fifteen-month survey conducted by Sharpe, Bohlen observed that the wrack line elevations varied from approximately 1.3 to 4.0 feet NGVD. He also noted that the wrack line comes into contact with the seawall at the higher elevations, preventing any additional shoreward movement of the wrack line and associated higher elevations. (Ex. RESP-41; test. F. Bohlen, 9/18/06, pp. 50,100-101, 112.)

23. Dr. Bohlen attempted to identify the causes for any significant difference between Sharpe's measured water surface elevations and the predicted high tide levels for the area. Bohlen considered the ambient conditions in the area and the reported elevations of the wrack lines noted during the survey period. He eliminated all data reflecting tidal and streamflow anomalies and all storm events. Bohlen concluded from the remaining data that the HTL, which he defines

as "the in-shore edge of the wrack line as marked in Sharpe's data set", fell between elevations of 2.9 and 3.2 feet NGVD. Based on the location of the seawall depicted on Plan IV, approximately forty feet of the southern portion of the seawall is located waterward of elevation 3.2 feet. (Ex. RESP-41; test. F. Bohlen, 9/19/06, pp. 80-86, 98-100, 112-117.)

5

Costal Site Plan Review

24. Representatives from the zoning and building departments of the Town of Old Saybrook, a coastal municipality, inspected the site in October 2004 to determine if the seawall was located landward of mean high water and if construction of the seawall required a permit from either municipal office. Subsequently, it was determined that the seawall met the statutory definition of a "shoreline flood and erosion control structure"[11] and that a coastal site plan should have been submitted to the zoning commission for its review and approval. (Test. C. Costa, 9/19/06, pp. 61-72.)

25. A review conducted by the Old Saybrook zoning commission would include consideration of whether the construction of such a seawall is consistent with the regulations of the Connecticut River Gateway Commission, which was created by the legislature to preserve the natural and scenic appearance of the Connecticut riverbank.[12] The Commission has promulgated implementing regulations, which have been adopted and are enforced by member municipalities including the Old Saybrook zoning commission. The regulations include height limits for homes and high tide set back requirements, and require a buffer of trees and brush along the river to preserve the natural characteristics of the riverside. (Ex. RESP-53; test. F. Vollono, 9/19/06, pp. 103-109, G. Sharpe, 9/26/06, p. 56.)

[11] Such structures are constructed for the purpose of controlling erosion from tidal, coastal or navigable waters and include seawalls or other significant barriers to the flow of flood waters or the movement of sediments along the shoreline. General Statutes §22a-109 (c).

[12] General Statutes §§25-102d through 25-102m. The Gateway Commission zone is approximately thirty miles long and encompasses eight member towns including Old Saybrook. (Test. F. Vollono, 9/19/06, p. 104.)

6
Removal of the Seawall

26. The Removal Order requires a plan to remove the seawall and all associated fill material to restore the site to its previous (pre-construction) condition. As a practical matter, the bank cannot be restored to its previous condition as it has been permanently altered due to the excavation and removal of vegetation necessary to install the seawall. The seawall must be removed from the top of the bank to the toe. As each gabion course is removed, the bank would be disassembled and ultimately fail. This would result in the loss of the mature trees upland of the seawall and the possible destabilization of the existing stone patio. The addition of sediment and debris from brush and fallen trees may affect the intertidal area around the site. (Ex. RESP-41, F. Bohlen, 9/19/06, pp. 127 - 132; C. Lawrie, 9/20/06, pp. 24-28.)

27. The department would require the respondents to remove the seawall only after adequate sediment and erosion controls have been put in place. Any restoration plan would have to include regrading the site. A grade of approximately thirty degrees would be necessary to stabilize vegetation and control erosion. To modify the bank to achieve a thirty-degree angle would require removal of the patio and seven mature trees, which would eliminate some of the natural characteristics of the riverside and cause the house to be visible from the river. (Ex. RESP-27; test. G. Sharpe, 9/26/06, pp. 52-54, M. Gryzwinski, 9/29/06, pp. 39, 40.)

28. The department would require an aggressive planting plan to cover the entire bank with suitable vegetation to provide stability and allow some transport of sand to the beach. The respondents' proposed alternative to the removal of the wall and restoration of the site, which includes leaving the two lower courses of the wall intact, represents a structural solution that would have a continuing adverse effect on sediment transport in the area. (Test. M. Gryzwinski, 9/29/06, pp. 42, 43.)

B

CONCLUSIONS OF LAW

1
Jurisdiction
a
General Statutes §22a-359: The High Tide Line

The Commissioner is authorized to regulate the erection of structures in tidal, coastal or navigable waters of the state; the landward limits of the Commissioner's jurisdiction extend to the HTL. §22a-359(a). The HTL is defined as "a line or mark left upon tide flats, beaches, or along shore objects that indicates the intersection of the land with the water's surface at the *maximum height* reached by a rising tide." §22a-359(c) Emphasis added. The HTL may be established by:

> (1) a line of oil or scum along shore objects, (2) a more or less continuous deposit of fine shell or debris on the foreshore or berm, (3) physical markings or characteristics, vegetation lines, tidal gauge, or (4) by *any other suitable means* delineating the general height reached by a rising tide. The term includes spring high tides and other high tides that occur with periodic frequency but *does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such at those accompanying a hurricane or other intense storm.*

§22a-359(c) Emphasis added.

The respondents claim that the seawall is located landward of the HTL and is therefore not subject to the commissioner's jurisdiction under §22a-359(a). Staff responds that at least the portion of the seawall that lies to the south of the respondents' dock is located waterward of the HTL. In support of their positions, the parties have presented considerable evidence of what they each believe to be the appropriate means for establishing the HTL.

i
Meteorological Influences on HTL

Staff considered the USACE published one-year frequency tidal flood profile (profile) to arrive at the specific HTL elevation of 4.1 feet NGVD. Staff also observed wrack lines and

water coming into contact with the seawall on-site during periods of predicted high tides with no intense storm activity in the area. The respondents relied on water level measurements relative to NGVD and comparisons to predicted high tides to arrive at HTL elevations ranging between 2.8 and 3.2 feet NGVD. However, they eliminated from consideration virtually all tidal and wrack line elevations that were influenced by stream flows or meteorological events, regardless of the intensity of the event.

The respondents claim that the profile, wrack line elevations, and water levels relative to the seawall are affected by storm events or wave and wake activity. They argue that staff's determinants of the HTL are incorrectly influenced by meteorological events that are excluded from the statutory definition of the HTL. Staff argues that the statute does not provide for a determination of the HTL based solely on astronomical tidal forces. Staff adds the "effects of normal, predictable storms such as those that occur on a yearly or periodic basis cannot be excluded" from a determination of the HTL.

In enacting §22a-359(c), the legislature has clearly authorized the Commissioner to use one or a combination of methods to establish the mark indicating the HTL and has not specified its preference for one method over another. The statute provides that the mark left by spring tides[13] of increased range due to astrological events is to be included in the term HTL. Other tides that may be affected by meteorological events are also included in the statute. Only storm surges that are due to intense meteorological events such as hurricanes are specifically excluded.

Connecticut courts have not had occasion to consider the issue of what other meteorological effects or storms, if any, should be excluded from a determination of the HTL in accordance with §22a-359(c). However, a federal court, in deciding the issue under the substantially same provision, 33 CFR §328[14], has held that the language "clearly refers to the strength of the winds accompanying the storm, and does not contemplate that evidence of *any*

[13] "Tides of increased range or tidal currents of increased speed occurring semimonthly as the result of the moon being new or full." (National Ocean Service Tide and Current Glossary, January 2000.)

[14] A regulation defining the landward limits of the federal Clean Water Act, 33 C.F.R. §328.3(d) defines the HTL as "the line of intersection of the land with the water's surface at the maximum height reached by a rising tide…. The line … does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm."

storm or rain in the vicinity can defeat jurisdiction…. Excluded from the high tide line are those tides affected by intense storms, accompanied by strong winds…*not* …tides that involve mere rain storms with lighter wind activity." *U.S. v Malibu Beach, Inc., et al.,* 711 F. Sup. 1301, 1311 (Dist. N.J. 1989)[15] Emphasis added.[16] The court's holding is instructive; I apply it here and reject the respondents' position that *any* storm conditions are to be excluded from the HTL determination.

The weather conditions noted in Sharpe's survey do not indicate the presence of intense storms accompanied by strong winds for any HTL measurement. Therefore, the water level elevations or wrack line elevations reported in the survey data are not a departure from the normal or predicted reach of the tide such that they should be excluded from a determination of the HTL. These high tide indicators can and will be included in the determination of the HTL at the respondents' seawall.

ii

Use of USACE Profile Elevations

The respondents' survey data show maximum wrack line elevations of 4.0 feet NGVD and maximum water levels of 4.3 and 4.4 feet NGVD, which approximate or exceed the USACE profile elevation. The respondents argue that use of the profile to establish the HTL is improper because §22a-359(c) does not specifically authorize its use to establish the HTL and there is no regulation that permits such use. The respondents claim that staff's use of the profile is, therefore, effectively an impermissible means "to enforce as a regulation[17] a conclusion as to the proper measurement of the [HTL]." The respondents argue further that the department "has

[15] The court considered Malibu's claims that "*any* storm activity would cause the high tide line for that day to occur beyond the normal predictable range of the tide" and the government's claim that only "large scale storms causing predictable departures from the normal tide" should be excluded. The court rejected both arguments, but found that wind conditions ranging from 29 to 41 miles per hour, "even if accompanied by rain storm activity" did not rise to the level of strong winds as contemplated by the regulation. The court concluded that it did not have to decide the minimum wind force that falls within the exception, but high tide lines resulting from winds of 29 to 41 miles per hour fell "within the defined normal and predictable range of the tides." U.S. v Malibu, supra, 1310 - 1311.

[16] See also *U.S. v. Boccanfuso*, 882 F. 2d 666 (2nd Cir. 1989) dissent on other grounds; (HTL excludes high tides caused by unusual events such as storm surges.)

[17] Regulation is defined as "each agency statement of general applicability, without regard to its designation, that implements, interprets, or prescribed law or policy, or described the organization, procedure, or practice requirements of any agency." General Statutes §4-166 (13).

attempted to exercise authority to expand the definition of the high tide in a manner not delegated to it by the legislature, and through a procedure of its own invention."

The test for determining if staff's use of the profile is improper rule-making is whether such use has a "substantial impact on the rights and obligations of parties who may appear before the agency in the future." *Salmon Brook Convalescent Home, Inc. v. Comm'n. on Hospitals and Health Care*, 177 Conn. 356, p. 362 (1979). Staff argues that it does not claim that the profile elevation is *the* jurisdictional HTL or even a '"a universal method' enforced against everyone." Staff continues that the profile is used as a "rough approximation" of the HTL where a precise determination of the HTL is not essential. In circumstances such as this enforcement order, where the location of
the HTL is a crucial factor, staff relies on a combination of methods to confirm the maximum reach of the tide. Use of one or a combination of methods is entirely consistent with §22a-359(c).

It is notable that the only references to the profile elevation of 4.1 feet as the HTL are in the respondents' site Plans I, II and III. In the absence of such plans that delineate the elevations on the site, the location of the profile elevation would not have been available to staff. It is therefore reasonable to infer that the profile elevations are not always available for purposes of determining the HTL. In the instant case it is clear that the profile elevation of 4.1 feet merely provided one reference point for staff to establish the maximum height of the tide in the area of the respondents' seawall. In fact, the record shows that staff initially concluded that a violation had occurred on the respondents' site based on its field observations, not on the profile elevations.

The respondents have not provided any evidence of the department's use of the profile elevations such that it substantially impacts the rights and obligations of parties that may appear before the agency in the future.[18] As there may be occasions where such information is not even available for staff's consideration, it is unreasonable to conclude that use of a profile elevation

[18] In their brief, the respondents state that staff "testified that the Department has not considered any method of determining the location of the HTL other than the one-year frequency tidal flood elevation." This statement misrepresents staff's testimony that the department viewed the profile elevations as a suitable means of determining the HTL consistent with the statutory definition of the HTL. (Test. M. Gryzwinski, 9/29/06, p. 29.)

would be a "universal method" applied to all respondents. In light of these facts, I cannot conclude that staff's use of the profile has general applicability as a regulation to enforce the proper measurement of the HTL. There is no basis to conclude that staff's use of the profile is improper.

iii
High Tide Line Established

The Commissioner's landward jurisdiction extends to the intersection of the land with the water's surface at the *maximum* height of a rising tide. §22a-359(a). The record shows that the maximum height determined by Sharpe's standard survey techniques, and including all reported weather events, is 4.4 feet NGVD, 3.6 *inches* above the profile HTL of 4.1 feet NGVD. The "in-shore edge of the wrack line" as determined by Dr. Bohlen is 4.0 feet NGVD, about 1.2 *inches* below the profile elevation. Clearly, the different methods used to establish the HTL have produced virtually identical results.

Section 22a-359(c) provides that the HTL may be established by the location of the wrack line or by any other suitable means. The evidence on the record of the various methods used by the parties and their findings support a conclusion that any one or all of the means used in this case could be considered suitable for purposes of establishing the HTL.

Plans I, II and III show a portion of the respondents' seawall is located waterward of the HTL at 3.2 feet NGVD as established by Dr. Bohlen.[19] The entire portion of the first course of the seawall above grade and south of the dock is waterward of the profile elevation of 4.1 feet NGVD. Both parties have also noted that during occasions of high tide, water has come into direct contact with the footing and with the first course of the seawall along the southern portion of the respondents' shoreline. There is no question that a significant portion of the seawall is waterward of the HTL. The respondents' seawall is therefore subject to the Commissioner's jurisdiction under §22a-359.

[19] I have not considered the HTL of 2.8 feet NGVD as determined by Sharpe as it was only based on data obtained during the first four weeks of his fifteen-month survey.

b

General Statutes §22a-361; Tidal, Coastal or Navigable Waters

Any person seeking to construct or maintain a structure in tidal, coastal or navigable waters of the state waterward of the HTL must apply for and obtain a permit from the DEP that authorizes such structure and any attendant construction activities performed in the same area. §22a-361(a). In the instant case, the respondents believed that the seawall would be located and attendant construction activities would be conducted landward of the high tide line and did not apply for a permit prior to constructing the seawall.

The respondents claim that even if a portion of their wall is located waterward of the HTL, the Commissioner lacks jurisdiction to enforce the statute because the Connecticut River in the area of their property cannot be characterized as coastal, navigable or tidal waters in accordance with §22a-361.[20] The respondents' arguments on the costal and navigable characteristics of the Connecticut River are without merit. However, it is not necessary for me to address each of their arguments on this issue as I need only find that the Connecticut River is either coastal, navigable *or* tidal.

There is no question that the waters of the Connecticut River in the area of the respondents' property are tidal[21]. The respondents claim that the department "has adduced no evidence that the [seawall] is within tidal waters, whatever that might mean." However, the record is rife with evidence of the tidal characteristics of the river in the area, much of it provided by respondents' own witnesses. The parties measured high tide lines and corresponding water levels, consulted predicted tide charts for the area, and tidal datum and USACE tidal flood profiles for the Connecticut River. Dr. Bohlen testified regarding tidal influences reaching as far upstream as Hartford. It would defy logic and common sense to conclude that the seawall is not located in tidal waters merely because the department did not specify the precise evidence it intended to prove the point. The respondents' seawall is located

[20] The respondents' reliance on §22a-361 to challenge the Commissioner's jurisdiction is misplaced. That section requires that a permit be obtained prior to conducting activities within the Commissioner's jurisdictional limits, which are defined in §22a-359. However, to the extent that the respondents' arguments are pertinent to the issue of jurisdiction, I will consider them here.

[21] The word "tidal" means "pertaining to, affected by, or having tides: a tidal river." The American Heritage Dictionary of The English Language, New College Edition, 1979. "Tide" means "the periodic variation in the surface level of the oceans…and tidal regions of rivers…." Id.

in tidal waters of the state waterward of the high tide line and is therefore within the requirements of §22a-361(a).

c
General Statutes §22a-108: Coastal Site Plan Review/Determination Of Public Nuisance

Issuance of the Removal Order was based, in part, on the Commissioner's findings that the respondents' property and the location of the seawall are within the "coastal boundary" and subject to coastal site plan requirements. General Statutes §§22a-105, 22a-106, 22a-109, and §22a-94[22]. The Commissioner also found that because the respondents have not received lawful coastal site plan approval for their seawall from the Town of Old Saybrook, they have created and are maintaining a public nuisance. General Statutes §22a-108.

Section 22a-108 provides that any activity within the coastal boundary, not exempt from site plan review, and without prior municipal approval under §§22a-105, 22a-106 and 22a-109(b) is considered a public nuisance. Coastal municipalities are authorized to exercise all legally available enforcement remedies for the abatement of the nuisance. The Commissioner is also authorized to order abatement or removal of the nuisance and restoration of the site. [23]

The respondents claim that the statutes governing coastal site plan review do not authorize the Commissioner to determine whether they were required to obtain site plan approval prior to constructing their seawall and that such a determination falls within Old Saybrook's exclusive authority. The respondents argue that the Commissioner can only act *after* Old Saybrook has determined that the respondents were required to obtain coastal site plan review. The respondents also claim that coastal site plan approval is required for projects landward of the high tide line; as the department's jurisdictional limits are waterward of the high tide line, §22a-108 does not provide an independent basis for the Commissioner to exercise jurisdiction over their seawall.

[22] Section 22a-94(a) describes the "coastal area" to include the land and water within an area delineated by Long Island Sound and over thirty municipalities including Old Saybrook, Essex and Deep River. Subsection (b) of that section defines the landward and seaward boundaries of the coastal area, which delineate the "coastal boundary."
[23] The Commissioner may also initiate proceedings through the office of the Attorney General and is required to investigate and determine whether an activity constitutes a public nuisance after receipt of a petition signed by at least twenty-five residents.

The respondents correctly note that coastal municipalities are authorized to conduct coastal site plan reviews, which are intended for the purpose of determining compliance with local zoning requirements and consistency with planned coastal management policies. *Vartuli v. Sotire,* 192 Conn. 353, 358 (1984). Although the authority for coastal site plan review has been delegated to coastal municipalities, it is the statutes governing the process that provide for the circumstances under which such a review is necessary.

Coastal site plans are required for activities or projects located within the coastal boundary and landward of the mean high water mark, not the high tide line as respondents contend. Section 22a-105 provides that any plans submitted to the appropriate municipal zoning or planning commission or board for such activities trigger coastal site plan review. *Fort Trumbull Conservancy, LLC v. Planning and Zoning Comm'n,* 266 Conn. 338, 350 (2003). The municipality must determine if the coastal site plan complies with municipal regulations and ordinances and if "the potential adverse impacts of the proposed activity on both coastal resources and future water-dependent development activities are acceptable." §22a-106(a). The review process is also prescribed in detail by statute. §22a-109.

Any person who conducts an activity in violation of the coastal site plan review provisions is subject to civil penalties. The Commissioner is authorized to bring a civil action for the imposition and recovery of such penalties without any prior determination of a violation by the appropriate coastal municipality. §22a-106a. A municipality may exercise all enforcement remedies available to it to abate a public nuisance as defined by §22a-108, including any authority conferred by General Statutes §8-12[24]. However, the Commissioner may also order that the public nuisance be "halted, abated, removed or modified and that the site of the violation be restored as nearly as reasonably possible to its condition prior to the violation" under the authority of §§22a-6 and 22a-7. §22a-108.

This examination of the statutory scheme governing coastal site plan review contradicts the respondents' contentions that the municipality must first determine whether site plan review is required before the Commissioner may act on a violation of coastal site planning requirements.

[24] Section 8-12 sets forth the enforcement procedures for violation of municipal zoning regulations.

The statutes define the circumstances under which coastal site plan review is required, the scope of review, and the procedure for such a review. The statutes also confer upon the Commissioner the authority to pursue a variety of remedies beyond those available to the municipality for violations of the coastal site plan provisions. Neither the Commissioner nor Old Saybrook is precluded from enforcing these provisions in deference to the other; their jurisdiction is concurrent between the high tide line and the mean high water mark.

Section 22a-108 specifically provides that the Commissioner may issue a removal order following notice to the municipality of her intent to do so. In addition, the Commissioner *must* act independently on a petition submitted by residents of a municipality to investigate a public nuisance and *then* notify the municipality of her determination. It would be illogical to interpret the statute to require the Commissioner to wait for the municipality to determine the existence of a public nuisance before issuing a removal order. The respondents' arguments must fail. The Commissioner has the authority to determine that the respondents' entire seawall was constructed in violation of the coastal site plan review requirements of §22a-109 and to issue an order for its removal in accordance with §22a-108.

Finally, respondents claim that their seawall is otherwise exempt from coastal site plan review and permit regulations because it does not impact a coastal resource as the site of the seawall is not a coastal bluff or escarpment as defined by §22a-93(A)(7). The respondents' argument is based on their claim that they presented unrebutted evidence that the site is not specifically identified on a 1979 DEP Coastal Resource Map as a coastal bluff. They add that if "coastal resources are not implicated, there is no evidence from which it can be concluded that a coastal site plan is required."

The respondents have not cited to any authority for their contention that the site must be shown on a coastal resource map to meet the definition of a coastal bluff, nor have they indicated any rule that requires me to arrive at such a conclusion based on unrebutted testimony. Coastal resources are the coastal waters of the state and adjacent shorelines, and include bluffs and escarpments. §22a-93(A)(7). The record provides ample evidence to establish that the site of the seawall is adjacent to coastal waters and demonstrates all of the characteristics of a coastal bluff and escarpment.

In addition, coastal site plan review is required for activities located within the coastal boundary and landward of the mean high water mark. §22a-108(b). There is no provision for an exemption from site plan approval if an activity does not impact a coastal resource. Impacts on coastal resources, if any, are to be determined as part of the coastal site plan review process. §22a-105(e). Therefore, there is no basis for me to conclude that the respondents' seawall is exempt from coastal site plan review.

The respondents' property is located within the coastal boundary as established by §22a-94(b). There is no dispute that the entire seawall is located landward of the mean high water mark. The respondents were therefore required by §22a-109 to submit a coastal site plan for review by the Town of Old Saybrook and failed to do so. The seawall constitutes a public nuisance and the Commissioner is duly authorized and has rightfully exercised her jurisdiction to issue the Removal Order pursuant to §22a-108.

2
Statutory Violations

a
General Statutes §22a-361(a): Structures and Dredging/Permitting Requirements

The Commissioner is authorized to regulate the erection of structures and the placement of fill, and work incidental thereto, in tidal, coastal or navigable waters of the state waterward of the HTL. §22a-359(a). To engage in any of the activities described in that section, an application must be filed with the Commissioner to secure authorization to carry out that work. §22a-361(a). In arriving at a decision to authorize the work, the Commissioner must give due regard for the factors enumerated in that section[25].

[25] Section 22a-359(a) provides in relevant part that "decisions made by the Commissioner pursuant to this section shall be made with due regard for indigenous aquatic life, fish and wildlife, the prevention or alleviation of shore erosion and coastal flooding, the use and development of adjoining uplands, the improvement of coastal and inland navigation for all vessels, including small craft for recreational purposes, the use and development of adjacent lands and properties and the interests of the state, including pollution control, water quality, recreational use of public water and management of coastal resources, with proper regard for the rights and interests of all persons concerned.

In their brief, the respondents argue that I am required to consider and make findings on these factors in my determination of whether they have violated the requirements of §22a-361(a). I disagree. In order to affirm the Removal Order, I need only find that the seawall was erected and work incidental to that construction took place waterward of the HTL without proper authorization by the Commissioner.

It is undisputed that the respondents failed to obtain a permit or any authorization from the Commissioner prior to erecting the seawall. The site of the seawall displays all of the characteristics of a bluff, a coastal resource in tidal waters, and a significant portion of the seawall is located waterward of the HTL. It is evident from the location of the seawall that activities incidental to the construction of the seawall must have been conducted waterward of the HTL. The respondents have violated the requirements of §22a-361(a). Under the broad powers granted to the Commissioner pursuant to General Statutes §22a-6, the Commissioner is authorized to issue orders to address violations of environmental statutes and regulations. Therefore, as to the claim that the respondents have violated §22a-361, the Removal Order is affirmed.

b

General Statutes §22a-108: Public Nuisance/Order to Remove and Restore

The Commissioner is authorized under §22a-108 to issue an order to remove a public nuisance and to restore the site of any violation of coastal site plan requirements independent of any action taken by the municipal board or commission. Any structure constructed for the purpose of controlling erosion from tidal, coastal or navigable waters, including seawalls, constitutes a "shoreline flood and erosion control structure" and is not exempt from coastal site plan review requirements. §22-109(b) and (c).

The record amply demonstrates that the respondents' seawall was constructed for just such a purpose and therefore constitutes a shoreline flood and erosion control structure. It has already been established that the respondents' seawall is located within the coastal boundary and landward of the mean high water mark. In addition, it is undisputed that the respondents did not submit plans for construction of the seawall to the Old Saybrook zoning commission in accordance with §§22a-105, 22a-106 and 22a-109. The Commissioner has appropriately

determined that the respondents' seawall is a public nuisance as defined by §22a-108. Therefore, the Removal Order is affirmed as to the claim that respondents have violated the requirements of §§22a-105, 22a-106 and 22a-109.

3

The Remedy

The situation presented by this case illustrates the importance of effective enforcement for the attainment of the legislative objectives embodied in the CCMA. The Connecticut legislature has expressly stated its policies and goals for the effective management, use, protection and development of the state's coastal area through the CCMA. The policies most relevant to this case include:

> To insure that the development, preservation or use of the land and water resources of the coastal area proceeds in a manner consistent with the capability of the land and water resources to support development, preservation or use *without significantly disrupting either the natural environment* or sound economic growth;
>
> To *preserve and enhance coastal resources* in accordance with the policies established by chapters 439, 440, 446i, 446k, 447, 474 and 477;
>
> To resolve conflicts between competing uses on the shorelands adjacent to marine and tidal waters by giving *preference to uses that minimize adverse impacts on natural coastal resources* while providing long term and stable economic benefits;
>
> To coordinate planning and regulatory activities of public agencies at all levels of government to insure *maximum protection of coastal resources* while minimizing conflicts and disruption of economic development;....

§22a-92(a)(1), (2), (4) and (9) Emphasis added.

Additionally, the CCMA includes the following policies for administrative agencies:

> To manage coastal bluffs and escarpments so as to preserve their slope and toe; to *discourage uses which do not permit continued natural rates of erosion* and to disapprove uses that accelerate slope erosion and alter essential patterns and supply of sediments to the littoral transport system;
>
> To manage coastal hazard areas so as to insure that development proceeds in such a manner that hazards to life and property are minimized and to *promote nonstructural solutions to flood and erosion problems* except in those instances where structural alternatives prove unavoidable and

necessary to protect existing inhabited structures, infrastructure facilities or water dependent uses.

§22a-92(b)(2)(A) and (F) Emphasis added.

The Commissioner must ensure the attainment of the legislature's goals and policies through the administration of the regulatory programs under the Commissioner's jurisdiction. General Statutes §22a-98. Included in these regulatory programs is the clear authority to issue orders directing the removal of violating structures. §22a-108. Also included is the authority to enforce the provisions of §22a-361 to ensure against the very type of conduct under consideration in this matter.[26] The respondents violated the legislative policies and the provisions of the CCMA and §22a-361 with the construction of their seawall and its ongoing presence continues to do so. The Commissioner has appropriately ordered its removal.

The respondents contend that removal of the seawall will cause environmental harm to coastal resources in the area. The record indicates that such harm would only occur if the seawall were removed without adequate safeguards or modifications to the site. The department has established that it is possible to remove the seawall and restore the area without adverse effects to the environment. Such restoration may require modifications to the respondents' landscape, however, it is reasonable to infer from the record that some modifications would have been required had the respondents initially opted for a non-structural solution to their erosion problems rather than the seawall.

The respondents knew that a permit for the seawall would be required if it was constructed waterward of the HTL and chose not to apply for one. In addition, the respondents did not utilize project-specific drawings prior to construction of the seawall to ensure its location was not in violation of environmental statutes. It is also clear that all parties involved were well aware of the coastal site plan requirements and chose to ignore them. I cannot find that the respondents acted maliciously; it appears that they honestly believed that their seawall was located landward of the HTL. However, that does not explain their failure to pursue the requisite

[26] Of note are Senator Miotti comments during the debate over the bill proposed to extend the Commissioner's jurisdiction from mean high water to the HTL in §§22a-359 and 22a-361. The Senator stated that the "bill revises and clarifies the authority of the [DEP] and local zoning commissions to protect the shoreline of the state when interested parties are desirous of building erosion control structures along the shoreline of the state and … moves the regulatory line from the mean high water mark to the high tide mark." 275 S. Proc., Pt. 14, 1987, Sess., p. 4878.

coastal site plan review. Moreover, the respondents should not be rewarded for violating the law. The evidence is clear that the respondents knew they did not have permission to construct the seawall where they did. I find no authority that would permit violation of state and local laws or the policies of the CCMA to escape legal consequences because of the apparent good faith of the violators.

III
CONCLUSION

The important goals of the CCMA cannot be circumvented by the acts of individual property owners that can and must be remediated. The respondents, by erecting their seawall waterward of the HTL and without prior coastal site plan review, have violated the provisions of §§22a-105, 22a-106, 22a-109 and 22a-361(a). The Commissioner, acting within her legislatively mandated authority and within the scope of her jurisdiction, has properly ordered removal of the seawall and restoration of the site. The Removal Order is affirmed, and its effective date shall be the date of this Final Decision.

/s/ Jean F. Dellamarggio
Jean F. Dellamarggio, Hearing Officer

P A R T Y L I S T

Final Decision In the Matter of David and Betsy Sams
Order No. LIS-2004-091-V

PARTY	REPRESENTED BY
The Respondents	
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Department of Environmental Protection	
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Interested Person

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